



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,378	07/21/2006	Andrew William Atkins	011765-0325709	9656
909 7590 05/08/2009 PILLSBURY WINTHROP SHAW PITTMAN, LLP P.O. BOX 10500 MCLEAN, VA 22102				
EXAMINER				
SMITH, COURTNEY L				
ART UNIT		PAPER NUMBER		
2835				
MAIL DATE		DELIVERY MODE		
05/08/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/567,378

Applicant(s)

ATKINS ET AL.

Examiner

COURTNEY SMITH

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S5108)
- Paper No(s)/Mail Date 02/07/2008
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. **Claim 3** is objected to because of the following informalities: **It is to be noted that the airflow control device-22, page 4, lines 13-14 is disclosed in the specifications as valve-22, page 4, lines 22, although claim 3 does not further limit the assertion of the airflow control device to be a valve. The Examiner hereby ascertains the airflow control device to be a valve since they are disclosed and labeled as such. If these elements are otherwise intended to be separate elements appropriate action is required.**

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-13**, are rejected under 35 U.S.C. 102(e) as being anticipated by **(Muncaster 2005/0219809)**.

Regarding Claim 1, Muncaster discloses a temperature control device for a disk drive unit, the temperature control device comprising: a housing **(90, 15-Fig. 3)** for connection

to a carrier **(3-Fig. 1)** for a disk drive unit **(102, 202-Fig. 2)**; an air flow generator **(105-Fig. 3)** arranged in the housing for providing a flow of air to the disk drive unit in the connected carrier; and, an air flow control device, **(Detailed Description 0074—where baffle can be pivoted about a vertical axis and include a motor and/or doors or valves)** arranged at the side of the air flow generator and selectively configurable to control the air flow path whereby the temperature of air flowing to the disk drive unit can be controlled.

Regarding Claim 2, Muncaster discloses the temperature control device according to claim 1, comprising at least two apertures **(16 & 17)** in a side of the housing for providing possible air flow paths.

Regarding Claims 3-4, Muncaster discloses the temperature control device according to claim 2, comprising a linearly movable valve and pinion **(Detailed Description 0074—where baffle can be pivoted about a vertical axis and include a motor and/or doors or valves)** to control a degree of opening of the apertures. **It is to be noted that the airflow control device-22, page 4, lines 13-14 is disclosed in the specifications as valve-22, page 4, lines 22.**

Regarding Claims 5-7, Muncaster discloses the temperature control device according to any of claims 2, comprising a heat exchanger **(18-Fig. 4)** in communication with the apertures arranged to selectively receive and cool at least a portion of the air from a

said disk drive unit thereby to provide chilled air, wherein the air flow control device is selectively operable to cause air to recirculate directly across a said disk drive unit **(as depicted in Fig. 4).**, or to cause at least a portion of the air that has passed over a said disk drive unit to pass through the heat exchanger **(as depicted in Fig. 4).**

Regarding Claim 8, Muncaster discloses the temperature control device according to claim 5, wherein the first and second apertures are capable of being open or closed in a desired proportion such that air provided to a said disk drive unit is a mixture of directly recirculated air and air from the heat exchanger **(as depicted by airflow at 16, 17, and 18-Fig. 4).**

Regarding Claim 9, Muncaster discloses the temperature control device according to claim 1, comprising a selectively operable heater **(112-Fig. 3, Detailed Description 0017)** in the air flow path to a said disk drive unit for selectively heating air prior to said air flowing across a said disk drive unit.

Regarding Claim 10, Muncaster discloses the temperature control device according to any claim 1, wherein the air flow generator is a radial fan **(Detailed Description 0074).**

Regarding Claim 11, Muncaster discloses a disk drive unit test apparatus for receiving a plurality of disk drive units, the test apparatus comprising: a plurality of temperature control devices **(several temperature control devices--Detailed Descriptions 0074)** according to claims 1; and a plurality of carriers **(plurality of carrier modules--Detailed**

Description 0035), each for connection to a respective one of the temperature control devices and each for receiving a respective disk drive unit.

Regarding Claims 12-13, Muncaster discloses a method of testing one or more disk drive units, wherein the temperature of each of the one or more disk drive units is independently controlled (**Detailed Description 0003**) during testing/operation of the disk drive units, the temperature being controlled using a temperature control device according any to claim 1.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over (**Muncaster 2005/0219809**).

Regarding Claim 14, Muncaster discloses the temperature control device according to claim 2, in which the air flow control device comprises a valve (**Detailed Description 0074; where valves or blend doors may be used**) movable to vary the open area of the apertures. However in which the air flow control device comprises a substantially planar slidable valve movable to vary the open area of the apertures. **Except,**

Muncaster does not explicitly disclose the valve is substantially planar and slideable. It would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify the blend doors as planar and slideable since it was known in the art that blend doors either pivot or slide, and thus a sliding actuation may be used so that efficient air flow path may be sustained as opposed to an airflow path that may be restricted by a pivoting action that can block or cause pressure or turbulence changes.

Allowable Subject Matter

6. **Claim 15** is objected to as being dependent upon a rejected base claim, but would be allowable if all objections are overcome and if rewritten in independent form including all of the limitations of the base claim and any intervening claims for at least the reason that the air flow control device is provided at the same vertical level within the temperature control device as the air flow generator, the air flow control device being substantially planar and slidable to vary the degree of opening of apertures within a side of the housing of the temperature control device.

Response to Arguments

7. Applicant's arguments filed 02/26/2009 have been fully considered but they are not persuasive. **Regarding Claim 1;** the applicant argues that the 'baffle-260 in Muncaster is not an air control device and is not arranged at the side of the air flow

generator to selectively control air flow'. The Examiner respectfully disagrees. It is to be noted that the baffle is clearly an air control device disclosed in Detailed Description 0074, and further disclosed in the Summary-0029; where the baffle may pivot about a vertical axis to selectively control air by dividing incoming air from the temperature control module and supplying air to plural disk drives via a plurality of openings, and thus temperature to the disk drives may be controlled. The Examiner further notes that Fig.'s 3 and 4 depicts the baffle-260 is arranged at a side of the airflow generator as asserted, since the claim does not limit the 'a side' to any particular location, either explicitly or by virtue of the location of other associated elements.

8. The Examiner would also encourage the applicant to address the objection from the previous rejection: whereas the 'air flow control device' of claim 1 and 'a linearly moveable valve' of claim 3 are labeled the same in the specification, and thus the air flow control device should further limit the valve, if so intended.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to COURTNEY L. SMITH whose telephone number is (571)272-9094. The examiner can normally be reached on Monday-Friday 7:30a-5p (1st Fri. off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayprakash Gandhi can be reached on 571-272-3740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. L. S./

Application/Control Number: 10/567,378

Page 9

Art Unit: 2835

/Jayprakash N Gandhi/

Supervisory Patent Examiner, Art Unit 2835